

## ecology and environment, inc.

International Specialists in the Environment

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#### **MEMORANDUM**

DATE:

October 16, 1996

TO:

Mark Ader, U.S. EPA, Region 10

FROM:

Jeryl Kolb, Project Manager, E & E, Seattle

SUBJ:

Hazard Ranking System Score

Spur Industries, Inc. Spokane, Washington

REF:

Contract No. 68-W6-0008

Technical Direction Document No. 96-06-0001

cc:

Gary Sink, U.S. EPA, Region 10

William Carberry, E & E, Seattle

A Hazard Ranking System (HRS) score has been developed for the Spur Industries, Inc. site in Spokane, Washington as part of a Preliminary Assessment (PA) based on U.S. EPA site files, federal, state, and local government documents, target information, and where necessary, professional assumptions.

Spur Industries, Inc. is an active manufacturing facility involved in the custom bonding, machining, and sanding of aluminum plates. The facility operates a small chrome plating shop as part of these processes. The site operations and waste management practices have been a point of contention (b) (6)

As a consequence, numerous federal, state, and local government agencies have visited (b) (6) e, observed site operations and waste management procedures, and compared them to existing environmental regulations. Other than a few minor disposal issues, which have since been corrected, no spills, areas of staining, gross contamination, or on-site burial were observed during any of the investigations.

Please find attached HRS scoresheets generated using PREscore 4.1 software. The software program picked up an erroneous toxicity/mobility value for the groundwater pathway of 10,000 generating an incorrect waste characteristics value of 32 for the groundwater pathway. The toxicity/mobility value should be 100 and the waste characteristics value should be 10. The overall HRS score for the site is 9.61. The following information/assumptions were used to derive the score.

USEPA SF 1589431

#### Sources

- The two 450-gallon tanks in the plating building, one for chromic acid, the other for rinse water, are not used continuously and the process is a closed system whereby the materials are recycled and reused. Although adequate secondary containment is also present, the tanks will be considered as sources because of the potential for a release to the environment, either in the past or in the future. A hazardous waste quantity of 4.5 cubic yards is generated for this source.
- The facility includes a small used oil storage area located behind Building 1. The area is fenced and asphalted, but not roofed. The used oil is placed in poly 55-gallon drums after being removed from forklifts and other machinery. It is transported off site and recycled on a regular basis, and at the time of the START visit there were approximately five poly 55-gallon drums. A hazardous waste quantity of 275 gallons is generated for this source.
- At the time of the START visit there were also approximately 10 poly 55-gallon drums of chromic acid in a dry granular form stored behind Building 1. A hazardous waste quantity of 550 gallons is generated for this source.
- One poly 55-gallon drum of printing ink containing methyl ethyl ketone was also stored behind Building 1 during the START visit.
   A hazardous waste quantity of 55 gallons is generated for this source.

#### Groundwater Migration Pathway

- Chromium, hexavalent chromium, and lead provide toxicity/mobility factor values of 100.
- An observed release to groundwater is not assumed. Targets are expected to be subject to potential contamination.
- The nearest public drinking water well is located approximately one
  mile from the site and is part of the system that provides water to the
  site and surrounding neighborhood. The closest private drinking
  water well is also located approximately one mile from the site.
- Groundwater is a major resource in the area, is used to provide drinking water to approximately 33,500 people within a four mile radius of the site, and is used for cropland irrigation.
- The aquifer of concern (the Rathdrum Prairie Aquifer) is a sole source aquifer.

#### Surface Water Migration Pathway

 Chromium, hexavalent chromium, and lead provide a maximum toxicity/persistence value of 10,000 for the drinking water threat.

- Lead provides a maximum toxicity/persistence/bioaccumulation value of 5 X 10<sup>5</sup> for the human food chain threat.
- Lead provides a maximum ecosystem toxicity/persistence/environmental bioaccumulation value of 5 X 10<sup>6</sup> for the environmental threat.
- An observed release to surface water is not assumed, because surface water drains to on site drywells and terrain between the site and the nearest surface water body is level.
- The nearest surface water body is located approximately 0.5 miles south of the site.
- The 2-year, 24-hour rainfall event is 0.14 inches.
- The drainage area of the site is approximately 5 acres.
- Surficial soils are described to a depth of 12-14 inches as loams and sandy loams.
- The site is in a 500-year floodplain.
- The flow rate of the Spokane River is approximately 7,000 cubic feet per second.
- There is one drinking water intake located on the Spokane River within 15 miles downstream of the site that serves 2.47 people. Four additional surface water intakes on the river irrigate a total of 5 acres.
- The Spokane River within 15 miles downstream of the site is state-designated priority habitat used by the Bald eagle, a federally- and state-listed threatened species, and species of recreational importance. The surface water pathway does not contain populations of anadromous fish species, and no fish catch data exists, however, it is assumed that 200 pounds of fish are caught for human consumption within 15 miles downstream of the site.
- Approximately 20 miles of wetland river frontage exists within 15 miles downstream of the site.

#### Soil Exposure Pathway

- Chromium, hexavalent chromium, and lead provide the maximum toxicity value of 10,000.
- The site is currently active.
- There are no schools or day cares within 200 feet of the site. The nearest residence is located approximately 50 feet from the nearest potential source.

- The site is fenced with a gated entrance, is well-lit, and is not generally accessible to the public.
- Thirty-three workers are employed at the site.
- Approximately 1,112 people reside within one mile of the site.

#### Air Migration Pathway

- Methyl ethyl ketone provides the maximum toxicity/mobility value of 10.
- An observed release to air is not assumed because potential sources are contained or enclosed in buildings, and based on visual observations of the site.
- The nearest individual is located approximately 50 feet from the closest source, the plating tanks in Building 2.
- Approximately 36,450 people reside within four miles of the site.
- Areas used for commercial agriculture are present within 1/2 miles of the site.
- A state-designated priority habitat exists along the Spokane River within four miles of the site. The habitat is used by the Bald eagle, a federally- and state-listed threatened species, as well as others species of recreational importance.
- Approximately 303 acres of wetlands are located within four miles of the site.

If you have any questions regarding the HRS score or assumptions used to derive the score, please call me at 206/624-9537.

# PRESCORE 4.0 GROUND WATER MIGRATION PATHWAY SCORESHEET Spur Industries - 10/10/96

3 3 3 GROUND WATER MIGRATION PATHWAY 3 Factor Categories & Factors Value Maximum 3 Value 3 Assigned 3 3 Likelihood of Release to an Aguifer 3 3 Aguifer: Rathdrum Prairie 3 1. Observed Release 550 *3* 0 3 2. Potential to Release 10 3 10 3 2a. Containment 2b. Net Precipitation 10 3 3 3 5 3 2c. Depth to Aquifer 2d. Travel Time 3 35 3 2e. Potential to Release [lines 2a(2b+2c+2d)] 500 3 210 3 3 550 3 3 3. Likelihood of Release 210 3 3 Waste Characteristics 3 3 3 \* 3 1.00E+04 3 100 3 4. Toxicity/Mobility 100 3 3 5. Hazardous Waste Quantity 100 3 3 6. Waste Characteristics 32 3 3 Targets 3 7. Nearest Well 3 50 3 9.00E+00 3 3 8. Population 3 \*\* 3 0.00E+00 3 8a. Level I Concentrations 8b. Level II Concentrations \*\* 3 0.00E+00 3 \*\* 3 4.89E+02 3 3 8c. Potential Contamination \*\* 3 8d. Population (lines 8a+8b+8c) 4.89E+02 3 3 9. Resources 3 5 3 5.00E+00 3 3 20 3 310. Wellhead Protection Area 2.00E+01 3 \*\* 3 311. Targets (lines 7+8d+9+10) 3 5.23E+02 3 \*\* 3 312. Targets (including overlaying aquifers) 3 5.23E+02 3 313. Aquifer Score 3 100 3 42.60 3 /3,31 3 GROUND WATER MIGRATION PATHWAY SCORE (Sqw) 3 100 3 42.60 3/3.31

<sup>\*</sup> Maximum value applies to waste characteristics category.

<sup>\*\*</sup> Maximum value not applicable.

### SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDBD	DDDDDDDDDD	DBD	DDDDDDDDDD	?
3 SURFACE WATER OVERLAND/FLOOD MIGRATION	3		3		3
3 COMPONENT	3	Maximum	3	Value	3
3 Factor Categories & Factors	3	Value	3	Assigned	3
3 DRINKING WATER THREAT	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDDD			
3 Likelihood of Release	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$					
3 1. Observed Release	3	550			3
3 2. Potential to Release by Overland Flow	3		3		3
3 2a. Containment	3	10			3
3 2b. Runoff	3	25			3
3 2c. Distance to Surface Water	3	25			3
3 2d. Potential to Release by Overland	3	500	3	60	3
<pre>Flow [lines 2a(2b+2c)]</pre>	3		3		3
3 3. Potential to Release by Flood	3		3		3
3 3a. Containment (Flood)	3	10	3		3
3 3b. Flood Frequency	3	50	3		3
3 3c. Potential to Release by Flood	3	500	3	70	3
3 (lines 3a x 3b)	3		3		3
3 4. Potential to Release (lines 2d+3c)	3	500		130	3
3 5. Likelihood of Release	3	550	3	130	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDED	DDDDDDDDDD		DDDDDDDDDDD	4
3 Waste Characteristics	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDED	מ <i>ססססססססס</i>			4
3 6. Toxicity/Persistence	3	*	3	1.00E+04	3
3 7. Hazardous Waste Quantity	3	*	3		3
3 8. Waste Characteristics	3	100	3	32	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDD		DDDDDDDDDDDD	4
3 Targets	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		מסססססססססס	DEL		
3 9. Nearest Intake	3	50		0.002.00	3
310. Population	3		3		3
3 10a. Level I Concentrations	3	**	3		3
3 10b. Level II Concentrations	3	**	3		3
3 10c. Potential Contamination	3	**	3	4.00E-04	
3 10d. Population (lines 10a+10b+10c)	3	**		4.00E-04	
311. Resources	3	5	3	0.002.00	3
312. Targets (lines 9+10d+11)	3	**	3	5.00E+00	3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD					
313. DRINKING WATER THREAT SCORE	3	100		0.25	-
* Maximum value applies to waste characte					1
" Maximum value applies to waste Characte	TIDE	ius catego	TT A		

<sup>\*</sup> Maximum value applies to waste characteristics category. \*\* Maximum value not applicable.

## SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDBDD	DDDDDDDDD	DBL	DDDDDDDDDDD	0?
3 SURFACE WATER OVERLAND/FLOOD MIGRATION	3		3		3
3 COMPONENT	3	Maximum		Value	3
3 Factor Categories & Factors	3	Value	3	Assigned	3
3 HUMAN FOOD CHAIN THREAT	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDD	DDDDDDDDD	DEL	DDDDDDDDDDDDDD	04
3 Likelihood of Release	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDD	DEL	DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	04
314. Likelihood of Release (same as line 5		550	-	130	_
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDL	DDDDDDDDD	DEL	DDDDDDDDDDDDD	04
3 Waste Characteristics	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDD	DDDDDDDDDD	DEL	DDDDDDDDDDDI	D4
315. Toxicity/Persistence/Bioaccumulation	3	*	3	5.00E+05	3
316. Hazardous Waste Quantity	3	*	3	100	3
317. Waste Characteristics	3	1000	3	56	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDD	DDDDDDDDDD	DEL	DDDDDDDDDDDDDD	04
3 Targets	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDD	DDDDDDDDDD	DEL	DDDDDDDDDDI	04
318. Food Chain Individual	3	50	3	0.00E+00	3
319. Population	3		3		3
3 19a. Level I Concentrations	3	**		0.002.00	3
3 19b. Level II Concentrations	3	**	-		
3 19c. Pot. Human Food Chain Contaminat	ion3	**	3	0.002 00	3
				2 227 25	3
3 19d. Population (lines 19a+19b+19c)	3	**	3	3.00E-05	
		**	<i>3</i>	3.00E-05 3.00E-05	3
3 19d. Population (lines 19a+19b+19c)	<i>3</i>	** DDDDDDDDD1	3 DEL	3.00E-05	0
3 19d. Population (lines 19a+19b+19c) 320. Targets (lines 18+19d) CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	3 3 DDDDEDD 3	** DDDDDDDDD 100	3 DEL 3	3.00E-05 DDDDDDDDDDD 0.00	3
3 19d. Population (lines 19a+19b+19c) 320. Targets (lines 18+19d) CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	3 DDDDEDD 3 DDDDADD	** DDDDDDDDDD 100 DDDDDDDDD	3 DEL 3 DAL	3.00E-05 DDDDDDDDDDD 0.00 DDDDDDDDDDD	3
3 19d. Population (lines 19a+19b+19c) 320. Targets (lines 18+19d) CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	3 DDDDEDD 3 DDDDADD	** DDDDDDDDDD 100 DDDDDDDDD	3 DEL 3 DAL	3.00E-05 DDDDDDDDDDD 0.00 DDDDDDDDDDD	3

## SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

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3 SURFACE WATER OVERLAND/FLOOD MIGRATION	N 3		3
3 COMPONENT	3		3 Value 3
3 Factor Categories & Factors	3	Value	3 Assigned 3
3 ENVIRONMENTAL THREAT	3		3 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDD	EDDDDDDDDDDD4
3 Likelihood of Release	3		3 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDDD	EDDDDDDDDDDD4
322. Likelihood of Release (same as line	e 5) 3	550	3 130 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDDD	EDDDDDDDDDDD4
3 Waste Characteristics	3		3 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDDD	
323. Ecosystem Toxicity/Persistence/Bioa	acc. 3	*	3 5.00E+06 3
324. Hazardous Waste Quantity	3	*	3 100 3
325. Waste Characteristics	3	1000	3 100 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDDD	EDDDDDDDDDDD4
3 Targets	3		3 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDDD	EDDDDDDDDDDD4
326. Sensitive Environments	3		3
3 26a. Level I Concentrations	3	**	3 0.00E+00 3
3 26b. Level II Concentrations	3	**	3 0.00E+00 3
3 26c. Potential Contamination	3	**	3 5.75E-02 3
3 26d. Sensitive Environments	3	**	3 5.75E-02 3
3 (lines 26a+26b+26c)	3		3 3
327. Targets (line 26d)	3		3 5.75E-02 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED.	DDDDDDDDDDD	EDDDDDDDDDDD4
328. ENVIRONMENTAL THREAT SCORE	3	60	0 . 0 . 0
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDED		
329. WATERSHED SCORE	3	100	
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$			
330. SW: OVERLAND/FLOOD COMPONENT SCORE		100	
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD			
* Maximum value applies to waste chara	acterist	ics catego	ry.
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\*\* Maximum value not applicable.

### GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

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3 GROUND WATER TO SURFACE WATER MIGRATIO	N 3		3		3
3 COMPONENT	3	Maximum	3	Value	3
3 Factor Categories & Factors	3	Value	3	Assigned	3
3 DRINKING WATER THREAT	3		3		3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDDDED.	DDDDDDDDDD	DED	DDDDDDDDDDI	D4
3 Likelihood of Release to Aquifer	3		3		3
3 Aquifer: Rathdrum Prairie	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDED.	DDDDDDDDDD	DED	DDDDDDDDDDI	D4
3 1. Observed Release	3	550	3	0	3
3 2. Potential to Release	3		3		3
3 2a. Containment	3	10	3	10	3
3 2b. Net Precipitation	3	10	3	3	3
3 2c. Depth to Aquifer	3	5	3	3	3
3 2d. Travel Time	3	35	3	15	3
3 2e. Potential to Release	3		3		3
3 [lines 2a(2b+2c+2d)]	3	500	3	210	3
3 3. Likelihood of Release	3	550	3	210	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDED	ומממממממממ	DED	DDDDDDDDDDI	D4
3 Waste Characteristics	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		וממממממממ	DED	DDDDDDDDDDI	04
3 4. Toxicity/Mobility/Persistence	3	*	3	1.00E+02	3
3 5. Hazardous Waste Quantity	3	*	3	100	3
3 6. Waste Characteristics	3	100	3	10	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDED	DDDDDDDDDD	DED	DDDDDDDDDDI	04
3 Targets	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDED	DDDDDDDDDD	DED	DDDDDDDDDDI	04
3 7. Nearest Intake	3	50	3	0.00E+00	3
3 8. Population	3		3		3
3 8a. Level I Concentrations	3	**	3	0.00E+00	3
3 8b. Level II Concentrations	3	**	3	0.00E+00	3
3 8c. Potential Contamination	3	* *	3	0.00E+00	3
3 8d. Population (lines 8a+8b+8c)	3	**	3	0.00E+00	3
3 9. Resources	3	5	3	5.00E+00	3
310. Targets (lines 7+8d+9)	3	**	3	5.00E+00	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDED.	DDDDDDDDDD	DED	DDDDDDDDDDI	04
311. DRINKING WATER THREAT SCORE	3	100	3	0.13	3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDDDDAD	DDDDDDDDDD	DAD	DDDDDDDDDI	DY
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<sup>\*</sup> Maximum value applies to waste characteristics category. \*\* Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

Z D D D D D D D D D D D D D D D D D D D	?
3 GROUND WATER TO SURFACE WATER MIGRATION 3	3
3 COMPONENT 3 Maximum 3 Value	3
3 Factor Categories & Factors 3 Value 3 Assigned	3
3 HUMAN FOOD CHAIN THREAT 3	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
3 Likelihood of Release 3	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
312. Likelihood of Release (same as line 3) 3 550 3 210	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
3 Waste Characteristics 3	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
313. Toxicity/Mobility/Persistence/Bioacc. 3 * 3 5.00E+05	3
314. Hazardous Waste Quantity 3 * 3 100	3
315. Waste Characteristics 3 1000 3 56	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
3 Targets 3	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
316. Food Chain Individual 3 50 3 0.00E+00	3
317. Population 3	3
	3
	3
3 17c. Pot. Human Food Chain Contamination 3 ** 3 0.00E+00	3
3 17d. Population (lines 17a+17b+17c) 3 ** 3 0.00E+00	3
318. Targets (lines 16+17d) 3 ** 3 0.00E+00	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	4
319. HUMAN FOOD CHAIN THREAT SCORE 3 100 3 0.00	3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	Y
* Maximum value applies to waste characteristics category.  ** Maximum value not applicable.	

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDBD	DDDDDDDDDD	DBDI	DDDDDDDDDD	)?
3 GROUND WATER TO SURFACE WATER MIGRATION	3		3		3
3 COMPONENT	3	Maximum		Value	3
3 Factor Categories & Factors	3	Value	3	Assigned	3
3 ENVIRONMENTAL THREAT	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD1	DEDL	DDDDDDDDDD	)4
3 Likelihood of Release	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$					04
320. Likelihood of Release (same as line 3		550			3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDDD		DDDDDDDDDI	
3 Waste Characteristics	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$					
321. Ecosystem Tox./Mobility/Persist./Bioa	cc.3	*	3	5.00E+04	3
322. Hazardous Waste Quantity	3	*	3	100	3
323. Waste Characteristics	3	1000		32	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		DDDDDDDDDI	DEDI	DDDDDDDDDDDDDD	)4
3 Targets	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$		<i>DDDDDDDDDD</i>	DEDI	וסססססססססס	)4
324. Sensitive Environments	3	4.46	3	0 00=.00	3
3 24a. Level I Concentrations	3	**	3	0.00E+00	3
3 24b. Level II Concentrations	3	**	3	0.00E+00	3
3 24c. Potential Contamination	3	**	3	0.00E+00	3
3 24d. Sensitive Environments	3	**	3	0.00E+00	3
3 (lines 24a+24b+24c)	3	de de	3	0 00=.00	3
325. Targets (line 24d)	3	**	3	0.00E+00	3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD					)4
326. ENVIRONMENTAL THREAT SCORE	3	60		0.00	3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDED			<i>ומטמטמטמטסנס</i> 0 . 1 3	
327. WATERSHED SCORE	3	100	_	ייט ממממממממממ	3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	משטטעוע 3	וטטטטטטטטט 100	or stead stead over	0.13	
328. SW: GW to SW COMPONENT SCORE (Sgs) @DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD					
					JI
* Maximum value applies to waste charact	erist	ios catego	DIA.	il.	
** Maximum value not applicable.					

# PREscore 4.0 SOIL EXPOSURE PATHWAY SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDBD	DDDDDDDDDD	DBD	DDDDDDDDDDI	D?
3 SOIL EXPOSURE PATHWAY	3		3		3
3 Factor Categories & Factors	3	Maximum	3	Value	3
3 RESIDENT POPULATION THREAT	3	Value	3	Assigned	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED	DDDDDDDDDDI	D4
3 Likelihood of Exposure	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED				
3 1. Likelihood of Exposure	3	550		550	
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED	וססססססססססס	D4
3 Waste Characteristics	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED	וססססססססססו	D4
3 2. Toxicity	3	*	3	1.00E+04	3
3 3. Hazardous Waste Quantity	3	*	3	100	3
3 4. Waste Characteristics	3	100	3	32	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED	DDDDDDDDDDI	D4
3 Targets	3		3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED		D4
3 5. Resident Individual	3	50	3	5.00E+01	3
3 6. Resident Population	3		3		3
3 6a. Level I Concentrations	3	* *	3	1.00E+01	3
3 6b. Level II Concentrations	3	**	3	0.00E+00	3
3 6c. Resident Population (lines 6a+6b)	3	**	3	1.00E+01	3
3 7. Workers	3	15	3	5.00E+00	3
3 8. Resources	3	5	3	0.00E+00	3
3 9. Terrestrial Sensitive Environments	3	***	3	0.00E+00	3
310. Targets (lines 5+6c+7+8+9)	3	**	3	6.50E+01	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDED	DDDDDDDDDD	DED	DDDDDDDDDDI	D4
311. RESIDENT POPULATION THREAT SCORE	3	**	3	1.14E+06	3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDAD	DDDDDDDDDD	DAD	DDDDDDDDDDI	DY
* Maximum value applies to waste characte	erist	ics catego	ory		
** Maximum value not applicable.					

<sup>\*\*\*</sup> No specific maximum value applies, see HRS for details.

## PREscore 4.0 SOIL EXPOSURE PATHWAY SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDDDDDBDD	DDDDDDDDD	BDDDDDDDDDDD?
3 SOIL EXPOSURE PATHWAY	3		3 3
3 Factor Categories & Factors	3 1	Maximum	3 Value 3
3 NEARBY POPULATION THREAT	3	Value	3 Assigned 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD		DDDDDDDDDD	EDDDDDDDDDDD4
3 Likelihood of Exposure	3		3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD			EDDDDDDDDDDD4
312. Attractiveness/Accessibility	3	100	
313. Area of Contamination	3	100	
314. Likelihood of Exposure	3	500	3 0.00E+00 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDDEDDI	DDDDDDDDDD	EDDDDDDDDDDD4
3 Waste Characteristics	3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDDEDDI	DDDDDDDDD	EDDDDDDDDDDD4
315. Toxicity	3	*	3 1.00E+04 3
316. Hazardous Waste Quantity	3	*	3 100 3
317. Waste Characteristics	3	100	3 32 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDDEDDI	DDDDDDDDDD	EDDDDDDDDDDD4
3 Targets	3		3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$			
318. Nearby Individual	3		3 0.00E+00 3
319. Population Within 1 Mile	3	**	3 1.00E+00 3
320. Targets (lines 18+19)	3		3 1.00E+00 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$			EDDDDDDDDDDD4
321. NEARBY POPULATION THREAT SCORE	3	**	3 0.00E+00 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDDDDEDD		
3 SOIL EXPOSURE PATHWAY SCORE (Ss)	3	100	
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD			
* Maximum value applies to waste char	racteristic	cs catego	ry.

<sup>\*\*</sup> Maximum value not applicable.

#### PREscore 4.0 AIR PATHWAY SCORESHEET Spur Industries - 10/10/96

ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDBDD	DDDDDDDDDI	BDI	DDDDDDDDD?
3 AIR MIGRATION PATHWAY	3		3	3
3 Factor Categories & Factors	3	Maximum	3	Value 3
3	3	Value	3	Assigned 3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDDEDD	DDDDDDDDD	EDL	DDDDDDDDDD 4
3 Likelihood of Release	3		3	3
${\it CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD$	DDDEDD	DDDDDDDDD	DEDL	DDDDDDDDDDD4
3 1. Observed Release	3	550		0 3
3 2. Potential to Release	.3		3	3
3 2a. Gas Potential to Release	3	500	3	150 <i>3</i>
3 2b. Particulate Potential to Release	3	500		42 3
3 2c. Potential to Release	3	500		150 3
3 3. Likelihood of Release	3	550		150 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	תחקתחתה מחקתחתה			4000
3 Waste Characteristics	3		3	3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	0	וממממממממ	-	<i>א</i> מממממממממ
3 4. Toxicity/Mobility	טעבעעעע 2	*	3	1.00E+01 3
3 5. Hazardous Waste Quantity	2	*	3	100 3
3 6. Waste Characteristics	2	100	-	6 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	ט מתשמתמת	200	-	0 0
	3	וטעעעעעעע	3	.3
3 Targets	-			
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD				
3 7. Nearest Individual	3	50		2.00E+01 3
3 8. Population	3	ale ale	3	3
3 8a. Level I Concentrations	3	**	3	0.00E+00 3
3 8b. Level II Concentrations	_		3	0.00E+00 3
3 8c. Potential Contamination	3	**		1.20E+01 3
3 8d. Population (lines 8a+8b+8c)	3	**	-	1.20E+01 3
3 9. Resources	3	5	3	5.00E+00 3
310. Sensitive Environments	3		3	3
3 10a. Actual Contamination	3	***		0.00E+00 3
3 10b. Potential Contamination	3	***	3	7.29E-01 3
3 10c. Sens. Environments(lines 10a+10h	) 3	***	3	7.29E-01 3
311. Targets (lines 7+8d+9+10c)	3	**	3	3.77E+01 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDDEDD			
3 AIR MIGRATION PATHWAY SCORE (Sa)	3	100		4.12E-01 3
@DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD	DDDDADD	DDDDDDDDD	DADI	DDDDDDDDDDY
* Maximum value applies to waste charact	eristi	cs catego	ory.	
** Maximum value not applicable.				
*** No specific maximum value applies, see	HRS f	or detail	S.	